

ABSTRACT OF THE DISCLOSURE

A method of providing a therapeutic effect in a human patient which comprises administering to the patient CD34+ cells obtained from cord blood. The CD34+ cells have been engineered with at least one nucleic acid sequence encoding a therapeutic agent. Such CD34+ cells may be engineered by transducing the cells with a retroviral vector including the nucleic acid sequence encoding the therapeutic agent. This method has been applied in treating newborn infants suffering from ADA deficiency.